Web Results **1 - 10** of about **985,000** for **state event notification network component**. (**0.14** seconds)

Siena: A Wide-Area **Event Notification** Service
Siena (Scalable Internet **Event Notification** Architectures) is a research ... **network**, are often engineered by means of the integration of **components**. ...
serl.cs.colorado.edu/siena/ - 23k - Cached - Similar pages

The Evolution of Internet-Scale **Event Notification** Services: Past ...
Status updates are perhaps the archetypal example of **event notification** – a telemetry stream of **notification** messages that encode **state** changes (deltas). ...
www.ics.uci.edu/~rohit/wacc - 65k - Cached - Similar pages

[PDF] Distributed **Event Notification** for Mobile Ad Hoc Networks
File Format: PDF/Adobe Acrobat
partition as a DENS node that's received a **notification** about that **event**. Having a consistent **state** is desirable. Therefore, the **state** management **component** ...
csdl.computer.org/comp/mags/ds/2004/08/o8002.pdf - Similar pages

[PDF] Herald: Achieving a Global **Event Notification** Service
File Format: PDF/Adobe Acrobat - View as HTML
avoid delivering redundant **event** notifications to sub-. scribers. Because **state** can be replicated or migrated be-. tween servers, the distribution **network** ...
research.microsoft.com/~mbj/papers/HotOS8.pdf - Similar pages

> Herald: Achieving an Internet-Scale **Event Notification** Service
> Delivery of an **event notification** message to many different subscribers must avoid repeated transmission of the same message over a given **network** link if it ...
> research.microsoft.com/sn/Herald/papers/HotOS8/HotOS8.html - 35k - Cached - Similar pages

Methods and apparatus for accomplishing call-**state** synchronization ...
[0091] **Component** 500 has an instance of K-server 505 provided thereon and adapted to provide **event notification** and **state** synchronization between multiple ...
www.freepatentsonline.com/20060018453.html - 65k - Cached - Similar pages

> Method and apparatus for providing a highly available distributed ...
> A method for providing **event notification** within a distributed computing .... Note that a **state** change for an application (or application **component**) can ...
> www.freepatentsonline.com/20040088401.html - 42k - Cached - Similar pages
> [More results from www.freepatentsonline.com]

SENS: System **Event Notification** Services and WMI Enable Flexible ...
System **Event Notification** Services and WMI Enable Flexible, Efficient Mobile **Network** Computing. Aspi Havewala. This article assumes you're familiar with WMI ...
msdn.microsoft.com/msdnmag/issues/02/08/SENS/ - 61k - Cached - Similar pages

Event Notification Messages
The APPN/SNASw and DLSw Maps applications send **event notification** messages to the workstation **network** management system (NMS) when changes in **network** status ...
www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/bluelist/cwblue31/cwbsi301/evntrap.htm - 56k - Cached - Similar pages

session initiation protocol sip **event notification** extension for
We can model the notifier as consisting of three **components**: the **event state** ... Full-**state**:
Last (most recent) full **state notification** of each resource is ...
tools.ietf.org/wg/sipping/draft-niemi-sipping-**event**-throttle-05.txt - 31k -
Cached - Similar pages

1 2 3 4 5 6 7 8 9 10 **Next**

---

state event notification network com Search

Search within results | Language Tools | Search Tips | Dissatisfied? Help us improve

---

Terms used **network component state notification** Found **2,427** of **204,472**

Sort results by relevance
Display results expanded form
Save results to a Binder
Search Tips
Open results in a new window

Try an Advanced Search
Try this search in The ACM Guide

Results 1 - 20 of 200 Result page: **1** 2 3 4 5 6 7 8 9 10 next
Best 200 shown Relevance scale

1 Full papers: Understanding self-healing in service-discovery systems
C. Dabrowski, K. Mills
November 2002 **Proceedings of the first workshop on Self-healing systems WOSS '02**
Publisher: ACM Press
Full text available: pdf(95.91 KB) Additional Information: full citation, abstract, references, citings, index terms

Service-discovery systems aim to provide consistent views of distributed components under varying network conditions. To achieve this aim, designers rely upon a variety of self-healing strategies, including: architecture and topology, failure-detection and recovery techniques, and consistency maintenance mechanisms. In previous work, we showed that various combinations of self-healing strategies lead to significant differences in the ability of service-discovery systems to maintain consistency d ...

Keywords: architecture, self-healing systems, self-repairing systems, service discovery

2 Location-based access and broadcasting: Supporting multiple subscription languages by a single event notification overlay in sparse MANETs
Katrine Stemland Skjelsvik, Anna Lekova, Vera Goebel, Ellen Munthe-Kaas, Thomas Plagemann, Norun Sanderson
June 2006 **Proceedings of the 5th ACM international workshop on Data engineering for wireless and mobile access MobiDE '06**
Publisher: ACM Press
Full text available: pdf(286.10 KB) Additional Information: full citation, abstract, references, index terms

The subscription language is an important design decision for distributed event notification services (DENS). In order to minimize resource consumption and enable applications to use rich and complex subscription languages only when they are really needed, we have developed a DENS that separates the concerns of delivering subscriptions and notifications from the subscription specification and event filtering, i.e., the subscription language. To resolve the conflict between subscription language ...

Keywords: middleware, publish/subscribe, subscription language

3 Supporting service discovery, querying and interaction in ubiquitous computing environments

Adrian Friday, Nigel Davies, Elaine Catterall
May 2001 **Proceedings of the 2nd ACM international workshop on Data engineering for wireless and mobile access MobiDe '01**
Publisher: ACM Press

Full text available: pdf(60.62 KB) Additional Information: full citation, abstract, references, citings, index terms

Future computing environments will consist of a wide range of network based appliances, applications and services interconnected using both wired and wireless networks. In order to encourage the development of applications in such environments and remove the need for complex administration and configuration tasks, researchers have recently developed a range of service discovery and interaction platforms. Examples of such platforms include SLP, HAVi, UPnP and Jini. While these platforms share ...

Keywords: Mobile and ubiquitous computing, middleware, service discovery, service interaction

4 Group G: modeling and evaluation methodology: Constraint-guided dynamic reconfiguration in sensor networks
Sachin Kogekar, Sandeep Neema, Brandon Eames, Xenofon Koutsoukos, Akos Ledeczi, Miklos Maroti
April 2004 **Proceedings of the third international symposium on Information processing in sensor networks IPSN '04**
Publisher: ACM Press

Full text available: pdf(388.61 KB) Additional Information: full citation, abstract, references, citings, index terms

This paper presents an approach for dynamic software reconfiguration in sensor networks. Our approach utilizes explicit models of the design space of the embedded application. The design space is captured by formally modeling all the software components, their interfaces, and their composition. System requirements are expressed as formal constraints on QoS parameters that are measured at runtime. Reconfiguration is performed by transitioning from one point of the operation space to another based ...

Keywords: design space exploration, runtime/dynamic software reconfiguration

5 A formal model for reasoning about adaptive QoS-enabled middleware
Nalini Venkatasubramanian, Carolyn Talcott, Gul A. Agha
January 2004 **ACM Transactions on Software Engineering and Methodology (TOSEM)**, Volume 13 Issue 1
Publisher: ACM Press

Full text available: pdf(1.42 MB) Additional Information: full citation, abstract, references, index terms

Systems that provide distributed multimedia services are subject to constant evolution; customizable middleware is required to effectively manage this change. Middleware services for resource management execute concurrently with each other, and with application activities, and can, therefore, potentially interfere with each other. To ensure cost-effective QoS in distributed multimedia systems, safe composability of resource management services is essential. In this article, we present a meta-arc ...

Keywords: Middleware services, actors, meta-object models, multimedia, quality-of-service, reflection, theoretical foundations

6 Middleware for protocol-based coordination in dynamic networks
Kurt Schelfthout, Danny Weyns, Tom Holvoet

November 2005 **Proceedings of the 3rd international workshop on Middleware for pervasive and ad-hoc computing MPAC '05**
Publisher: ACM Press
Full text available: pdf(548.63 KB) Additional Information: full citation, abstract, references, citings, index terms

Pervasive and ad hoc computing applications are frequently deployed in dynamic networks. Due to mobility of the computing nodes, their unreliability, or a limited communication range, at any time a node may enter or leave an interaction between a group of application components. Middleware approaches have been proposed to deal with these dynamics, by supporting the dissemination (or gathering) of information in dynamic networks. In our experience however, applications frequently need to execute ...

Keywords: coordination, middleware, mobile networks, roles

7 A component-based approach to distributed system management: a use case with self-manageable J2EE clusters
Sara Bouchenak, Fabienne Boyer, Emmanuel Cecchet, Sébastien Jean, Alan Schmitt, Jean-Bernard Stefani
September 2004 **Proceedings of the 11th workshop on ACM SIGOPS European workshop: beyond the PC EW11**
Publisher: ACM Press
Full text available: pdf(100.29 KB) Additional Information: full citation, abstract, references

Clustering has become a de facto standard to scale distributed systems and applications. However, the administration and management of such systems still use ad-hoc techniques that partially fulfill the needs. The expertise needed to configure and tune these systems goes beyond the capacity of a single system administrator or software developer.We present a modular software infrastructure to build command and control loops to manage large scale distributed systems. Our approach uses a reflective ...

8 HLA-based Adaptive Distributed Simulation of Wireless Mobile Systems
Luciano Bononi, Gabriele D'Angelo, Lorenzo Donatiello
June 2003 **Proceedings of the seventeenth workshop on Parallel and distributed simulation PADS '03**
Publisher: IEEE Computer Society
Full text available: pdf(367.43 KB) Publisher Site Additional Information: full citation, abstract, citings, index terms

Wireless networks' models differ from wired ones atleast in the innovative dynamic effects of host-mobilityand open-broadcast nature of the wireless medium.Topology changes due to simulated hosts' mobility mapon causality effects in the "areas of influence" of eachmobile device. The analysis of wireless networks ofinterest today may include a potentially high number ofsimulated hosts, resulting in performance and scalabilityproblems for discrete-event sequential simulation toolsand methods, on a ...

9 Extending the Representational State Transfer (REST) Architectural Style for Decentralized Systems
Rohit Khare, Richard N. Taylor
May 2004 **Proceedings of the 26th International Conference on Software Engineering ICSE '04**
Publisher: IEEE Computer Society
Full text available: pdf(1.13 MB) Additional Information: full citation, abstract, citings, index terms

Because it takes time and trust to establish agreement,traditional consensus-based

architectural styles cannotsafely accommodate resources that change faster than ittakes to transmit notification of that change, nor resourcesthat must be shared across independent agencies.The alternative is decentralization: permitting independentagencies to make their own decisions. Ourdefinition contrasts with that of distribution, in whichseveral agents share control of a single decision.Ultimately, the physi ...

10 Achieving scalability and expressiveness in an Internet-scale event notification service

Antonio Carzaniga, David S. Rosenblum, Alexander L. Wolf

July 2000 **Proceedings of the nineteenth annual ACM symposium on Principles of distributed computing PODC '00**

Publisher: ACM Press

Full text available: pdf(937.62 KB) Additional Information: full citation, abstract, references, citings, index terms

This paper describes the design of SIENA, an Internet-scale event notification middleware service for distributed event-based applications deployed over wide-area networks. SIENA is responsible for selecting the notifications that are of interest to clients (as expressed in client subscriptions) and then delivering those notifications to the clients via access points. The key design challenge for SIENA is m ...

11 Tools & techniques: NodeMD: diagnosing node-level faults in remote wireless sensor systems

Veljko Krunic, Eric Trumpler, Richard Han

June 2007 **Proceedings of the 5th international conference on Mobile systems, applications and services MobiSys '07**

Publisher: ACM Press

Full text available: pdf(1.87 MB) Additional Information: full citation, abstract, references, index terms

Software failures in wireless sensor systems are notoriously difficult to debug. Resource constraints in wireless deployments substantially restrict visibility into the root causes of node-level system and application faults. At the same time, the high cost of deployment ofwireless sensor systems often far exceeds the cumulative cost of allother sensor hardware, so that software failures that completely disable a node are prohibitively expensive to repair in real worldapplications, e.g. by on ...

Keywords: deployment, diagnosis, software fault, wireless sensor networks

12 Using publish/subscribe middleware for mobile systems

Gianpaolo Cugola, H.-Arno Jacobsen

October 2002 **ACM SIGMOBILE Mobile Computing and Communications Review**, Volume 6 Issue 4

Publisher: ACM Press

Full text available: pdf(92.71 KB) Additional Information: full citation, abstract, references, citings, index terms

The range of mobile computing applications comprises location-based services, sensor networks, and ad hoc networking. Middleware for these applications must effectively support the interaction of a priori anonymous entities, support timely decoupled processing, and mediate between potentially millions of mobile clients. These requirements are hard to achieve with traditional client/server middleware systems. We argue that the publish/subscribe paradigm effectively addresses many of the challenge ...

13 Developing adaptive groupware applications using a mobile component framework

Radu Litiu, Atul Parakash

December 2000 **Proceedings of the 2000 ACM conference on Computer supported**

cooperative work CSCW '00
Publisher: ACM Press

Full text available: pdf(168.38 KB) Additional Information: full citation, abstract, references, citings, index terms

A need exists to develop groupware systems that adapt to available resources and support user mobility. This paper presents DACIA, a system that provides mechanisms for building such groupware applications. Using DACIA, components of a groupware application can be moved to different hosts during execution, while maintaining communication connectivity with groupware services and other users. DACIA provides mechanisms that simplify building groupware for domains where users are mobile. New co ...

14 Papers: infrastructure for ubicomp: User interfaces when and where they are needed: an infrastructure for recombinant computing
Mark W. Newman, Shahram Izadi, W. Keith Edwards, Jana Z. Sedivy, Trevor F. Smith
October 2002 **Proceedings of the 15th annual ACM symposium on User interface software and technology UIST '02**
Publisher: ACM Press

Full text available: pdf(673.34 KB) Additional Information: full citation, abstract, references, citings, index terms

Users in ubiquitous computing environments need to be able to make serendipitous use of resources that they did not anticipate and of which they have no prior knowledge. The Speakeasy recombinant computing framework is designed to support such ad hoc use of resources on a network. In addition to other facilities, the framework provides an infrastructure through which device and service user interfaces can be made available to users on multiple platforms. The framework enables UIs to be provided ...

Keywords: asynchronous user interfaces, recombinant computing, speakeasy, ubiquitous computing

15 Service applications: An OGSA-based accounting system for allocation enforcement across HPC centers
Thomas Sandholm, Peter Gardfjäll, Erik Elmroth, Lennart Johnsson, Olle Mulmo
November 2004 **Proceedings of the 2nd international conference on Service oriented computing ICSOC '04**
Publisher: ACM Press

Full text available: pdf(519.13 KB) Additional Information: full citation, abstract, references, index terms

In this paper, we present an Open Grid Services Architecture (OGSA)-based decentralized allocation enforcement system, developed with an emphasis on a consistent data model and easy integration into existing scheduling, and workload management software at six independent high-performance computing centers forming a Grid known as SweGrid. The Swedish National Allocations Committee (SNAC) allocates resource quotas at these centers to research projects requiring substantial computer time. Our sy ...

Keywords: HPC, OGSA, grid accounting, grid computing, security policy management, web services

16 Software performance and other quality attributes: A model-driven approach to performability analysis of dynamically reconfigurable component-based systems
Vincenzo Grassi, Raffaela Mirandola, Antonino Sabetta
February 2007 **Proceedings of the 6th international workshop on Software and performance WOSP '07**

Publisher: ACM Press
Full text available: pdf(420.26 KB) Additional Information: full citation, abstract, references, index terms

Dynamic reconfiguration techniques appear promising to build component-based (C-B) systems for application domains that have strong adaptability requirements, like the mobile and the service-oriented computing domains. However, introducing dynamic reconfiguration features into a C-B application makes even more challenging the design and verification of functional and non functional requirements. Our goal is to support the model-based analysis of the effectiveness of reconfigurable C-B applicatio ...

Keywords: dynamic reconfiguration, model-driven development, performability

17 Design of multicast protocols robust against inflated subscription
Sergey Gorinsky, Sugat Jain, Harrick Vin, Yongguang Zhang
April 2006 **IEEE/ACM Transactions on Networking (TON)**, Volume 14 Issue 2
Publisher: IEEE Press
Full text available: pdf(650.44 KB) Additional Information: full citation, abstract, references, index terms

To disseminate data to a heterogeneous body of receivers efficiently, congestion control protocols for IP multicast compose a session from several multicast groups and prescribe guidelines that enable each re ceiver to subscribe to an appropriate subset of the groups. However, a misbehaving receiver can ignore the group subscription rules and inflate its subscription to acquire unfairly high throughput. In this paper, we present the first solution for the problem of inflated subscription. Our de ...

Keywords: congestion control, fair bandwidth allocation, misbehaving receivers, multicast, robust communication protocols

18 An end-to-end approach to globally scalable programmable networking
Micah Beck, Terry Moore, James S. Plank
August 2003 **ACM SIGCOMM Computer Communication Review , Proceedings of the ACM SIGCOMM workshop on Future directions in network architecture FDNA '03**, Volume 33 Issue 4
Publisher: ACM Press
Full text available: pdf(447.96 KB) Additional Information: full citation, abstract, references, citings, index terms

The three fundamental resources underlying Information Technology are bandwidth, storage, and computation. The goal of wide area infrastructure is to provision these resources to enable applications within a community. The end-to-end principles provide a scalable approach to the architecture of the shared services on which these applications depend. As a prime example, IP and the Internet resulted from the application of these principles to bandwidth resources. A similar application to storage r ...

Keywords: Internet Backplane Protocol, Logistical Network Computing, active networking, asynchronous communications, distributed state management, end-to-end design, network storage, programmable networking, scalability, store and forward network

19 OMG overview: CORBA and the OMA in enterprise computing
Jon Siegel
October 1998 **Communications of the ACM**, Volume 41 Issue 10
Publisher: ACM Press
Full text available: pdf(148.89 KB) Additional Information: full citation, references, citings, index terms

20 GridStix: Supporting Flood Prediction using Embedded Hardware and Next Generation Grid Middleware

Danny Hughes, Phil Greenwood, Geoff Coulson, Gordon Blair

June 2006 **Proceedings of the 2006 International Symposium on on World of Wireless, Mobile and Multimedia Networks WOWMOM '06**

Publisher: IEEE Computer Society

Full text available: pdf(194.09 KB) Additional Information: full citation, abstract, index terms

The cost of damage caused by flooding is directly related to the warning-time given before a flood occurs. Therefore, improving the coverage, accuracy and reliability of flood prediction systems is of great importance. This paper proposes a novel Grid-based approach to supporting flood prediction through the use of embedded sensor nodes equipped with wireless networking technology. These nodes implement a light-weight Grid capable of collecting and transmitting data gathered by flood sensors for ...

Results 1 - 20 of 200 Result page: **1** 2 3 4 5 6 7 8 9 10 next

Terms used
network component state notification event transition

Found **679** of **204,472**

Sort results by: relevance
Display results: expanded form
Save results to a Binder
Search Tips
Open results in a new window

Try an Advanced Search
Try this search in The ACM Guide

Results 1 - 20 of 200 Result page: **1** 2 3 4 5 6 7 8 9 10 next
Best 200 shown Relevance scale

1 A formal model for reasoning about adaptive QoS-enabled middleware
Nalini Venkatasubramanian, Carolyn Talcott, Gul A. Agha
January 2004 **ACM Transactions on Software Engineering and Methodology (TOSEM)**, Volume 13 Issue 1
Publisher: ACM Press
Full text available: pdf(1.42 MB) Additional Information: full citation, abstract, references, index terms

Systems that provide distributed multimedia services are subject to constant evolution; customizable middleware is required to effectively manage this change. Middleware services for resource management execute concurrently with each other, and with application activities, and can, therefore, potentially interfere with each other. To ensure cost-effective QoS in distributed multimedia systems, safe composability of resource management services is essential. In this article, we present a meta-arc ...

Keywords: Middleware services, actors, meta-object models, multimedia, quality-of-service, reflection, theoretical foundations

2 Modular verification of asynchronous networks
Bengt Jonsson
December 1987 **Proceedings of the sixth annual ACM Symposium on Principles of distributed computing PODC '87**
Publisher: ACM Press
Full text available: pdf(1.72 MB) Additional Information: full citation, references, citings, index terms

3 A locking protocol for resource coordination in distributed databases
Daniel A. Menasce, Gerald J. Popek, Richard R. Muntz
June 1980 **ACM Transactions on Database Systems (TODS)**, Volume 5 Issue 2
Publisher: ACM Press
Full text available: pdf(2.69 MB) Additional Information: full citation, abstract, references, citings, index terms

A locking protocol to coordinate access to a distributed database and to maintain system consistency throughout normal and abnormal conditions is presented. The proposed protocol is robust in the face of crashes of any participating site, as well as communication failures. Recovery from any number of failures during normal operation or

any of the recovery stages is supported. Recovery is done in such a way that maximum forward progress is achieved by the recovery procedures. Integration of ...

Keywords: concurrency, consistency, crash recovery, distributed databases, locking protocol

4 Exploiting an event-based infrastructure to develop complex distributed systems
G. Cugola, E. Di Nitto, A. Fuggetta
April 1998 **Proceedings of the 20th international conference on Software engineering ICSE '98**
Publisher: IEEE Computer Society
Full text available: pdf(1.19 MB) Additional Information: full citation, references, citings, index terms
Publisher Site

5 Group communication specifications: a comprehensive study
Gregory V. Chockler, Idid Keidar, Roman Vitenberg
December 2001 **ACM Computing Surveys (CSUR)**, Volume 33 Issue 4
Publisher: ACM Press
Full text available: pdf(499.61 KB) Additional Information: full citation, abstract, references, citings, index terms, review

View-oriented group communication is an important and widely used building block for many distributed applications. Much current research has been dedicated to specifying the semantics and services of view-oriented group communication systems (GCSs). However, the guarantees of different GCSs are formulated using varying terminologies and modeling techniques, and the specifications vary in their rigor. This makes it difficult to analyze and compare the different systems. This survey provi ...

Keywords: Group communication systems, partitionable group membership, process group membership, specifications of group communication systems, view synchrony, virtual synchrony

6 Software performance and other quality attributes: A model-driven approach to performability analysis of dynamically reconfigurable component-based systems
Vincenzo Grassi, Raffaela Mirandola, Antonino Sabetta
February 2007 **Proceedings of the 6th international workshop on Software and performance WOSP '07**
Publisher: ACM Press
Full text available: pdf(420.26 KB) Additional Information: full citation, abstract, references, index terms

Dynamic reconfiguration techniques appear promising to build component-based (C-B) systems for application domains that have strong adaptability requirements, like the mobile and the service-oriented computing domains. However, introducing dynamic reconfiguration features into a C-B application makes even more challenging the design and verification of functional and non functional requirements. Our goal is to support the model-based analysis of the effectiveness of reconfigurable C-B applicatio ...

Keywords: dynamic reconfiguration, model-driven development, performability

7 A design framework for Internet-scale event observation and notification
David S. Rosenblum, Alexander L. Wolf

November 1997 **ACM SIGSOFT Software Engineering Notes , Proceedings of the 6th European conference held jointly with the 5th ACM SIGSOFT international symposium on Foundations of software engineering ESEC '97/FSE-5**, Volume 22 Issue 6
Publisher: Springer-Verlag New York, Inc., ACM Press
Full text available: pdf(1.58 MB) Additional Information: full citation, references, citings, index terms

Keywords: Internet, design, distributed systems, events, software engineering

8 Design and evaluation of a wide-area event notification service
Antonio Carzaniga, David S. Rosenblum, Alexander L. Wolf
August 2001 **ACM Transactions on Computer Systems (TOCS)**, Volume 19 Issue 3
Publisher: ACM Press
Full text available: pdf(1.08 MB) Additional Information: full citation, abstract, references, citings, index terms, review

The components of a loosely coupled system are typically designed to operate by generating and responding to asynchronous events. An event notification service is an application-independent infrastructure that supports the construction of event-based systems, whereby generators of events publish event notifications to the infrastructure and consumers of events subscribe with the infrastructure to receive relevant notifications. The two primary services that should be provid ...

Keywords: content-based addressing and routing, event notification, publish/subscribe

9 Data link layer: two impossibility results
Nancy A. Lynch, Yishay Mansour, Alan Fekete
January 1988 **Proceedings of the seventh annual ACM Symposium on Principles of distributed computing PODC '88**
Publisher: ACM Press
Full text available: pdf(2.39 MB) Additional Information: full citation, references, citings, index terms

10 Event-to-sink reliable transport in wireless sensor networks
Özgür B. Akan, Ian F. Akyildiz
October 2005 **IEEE/ACM Transactions on Networking (TON)**, Volume 13 Issue 5
Publisher: IEEE Press
Full text available: pdf(634.07 KB) Additional Information: full citation, abstract, references, index terms

Wireless sensor networks (WSNs) are event-based systems that rely on the collective effort of several microsensor nodes. Reliable event detection at the sink is based on collective information provided by source nodes and not on any individual report. However, conventional end-to-end reliability definitions and solutions are inapplicable in the WSN regime and would only lead to a waste of scarce sensor resources. Hence, the WSN paradigm necessitates a collective event-to-sink reliability notion ...

Keywords: congestion control, energy conservation, event-to-sink reliability, reliable transport protocols, wireless sensor networks

11 Miscellany: A comparison of hard-state and soft-state signaling protocols
Ping Ji, Zihui Ge, Jim Kurose, Don Towsley

August 2003 **Proceedings of the 2003 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '03**
Publisher: ACM Press

Full text available: pdf(363.90 KB) Additional Information: full citation, abstract, references, citings, index terms

One of the key infrastructure components in all telecommunication networks, ranging from the telephone network, to VC-oriented data networks, to the Internet, is its signaling system. Two broad approaches towards signaling can be identified: so-called hard-state and soft-state approaches. Despite the fundamental importance of signaling, our understanding of these approaches - their pros and cons and the circumstances in which they might best be employed - is mostly anecdotal (and occasionally re ...

Keywords: hard-state, signaling, soft-state

12 Computing curricula 2001
September 2001 **Journal on Educational Resources in Computing (JERIC)**
Publisher: ACM Press
Full text available: pdf(613.63 KB) html(2.78 KB) Additional Information: full citation, references, citings, index terms

13 SWiMNet: a scalable parallel simulation testbed for wireless and mobile networks
Azzedine Boukerche, Sajal K. Das, Alessandro Fabbri
September 2001 **Wireless Networks**, Volume 7 Issue 5
Publisher: Kluwer Academic Publishers

Full text available: pdf(397.98 KB) Additional Information: full citation, abstract, references, citings, index terms

We present a framework, called SWiMNet, for parallel simulation of wireless and mobile PCS networks, which allows realistic and detailed modeling of mobility, call traffic, and PCS network deployment. SWiMNet is based upon event precomputation and a combination of optimistic and conservative synchronization mechanisms. Event precomputation is the result of model independence within the global PCS network. Low percentage of blocked calls typical for PCS networks is exploited in the channel alloca ...

Keywords: PCS network models, framework for PCS network simulation, parallel discrete event simulation, performance analysis

14 The impossibility of implementing reliable communication in the face of crashes
Alan Fekete, Nancy Lynch, Yishay Mansour, John Spinelli
November 1993 **Journal of the ACM (JACM)**, Volume 40 Issue 5
Publisher: ACM Press

Full text available: pdf(1.46 MB) Additional Information: full citation, references, citings, index terms, review

Keywords: connection reset, lower bounds

15 Building, modifying and using component generators
Stephen B. Ornburn, Richard J. LeBlanc
May 1993 **Proceedings of the 15th international conference on Software Engineering**

ICSE '93
Publisher: IEEE Computer Society Press
Full text available: pdf(1.32 MB) Additional Information: full citation, references

16 Compositional specification and verification of distributed systems

Bengt Jonsson
March 1994 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 16 Issue 2
Publisher: ACM Press

Full text available: pdf(3.15 MB) Additional Information: full citation, abstract, references, citings, index terms, review

We present a method for specification and verification of distributed systems that communicate via asynchronous message passing. The method handles both safety and liveness properties. It is compositional, i.e., a specification of a composite system can be obtained from specifications of its components. Specifications are given as labeled transition systems with fairness properties, using a program-like notation with guarded multiple assignments. Compositionality is attained by partitioning ...

Keywords: assertional reasoning, compositionality, message passing, modular specification, specification, stepwise refinement

17 An open-source CVE for programming education: a case study: An open-source CVE for programming education: a case study

Andrew M. Phelps, Christopher A. Egert, Kevin J. Bierre, David M. Parks
July 2005 **ACM SIGGRAPH 2005 Courses SIGGRAPH '05**
Publisher: ACM Press
Full text available: pdf(7.92 MB) Additional Information: full citation, references

18 Languages designed: Mace: language support for building distributed systems

Charles Edwin Killian, James W. Anderson, Ryan Braud, Ranjit Jhala, Amin M. Vahdat
June 2007 **Proceedings of the 2007 ACM SIGPLAN conference on Programming language design and implementation PLDI '07**
Publisher: ACM Press
Full text available: pdf(280.03 KB) Additional Information: full citation, abstract, references, index terms

Building distributed systems is particularly difficult because of the asynchronous, heterogeneous, and failure-prone environment where these systemsmust run. Tools for building distributed systems must strike a compromise between reducing programmer effort and increasing system efficiency. We present *Mace*, a C++ language extension and source-to-source compiler that translates a concise but expressive distributed system specification into a C++ implementation. Mace overcomes the limitat ...

Keywords: Mace, concurrency, debugging, distributed systems, domain specific languages, event driven programming, model checking

19 Modeling software architectures in the Unified Modeling Language

Nenad Medvidovic, David S. Rosenblum, David F. Redmiles, Jason E. Robbins
January 2002 **ACM Transactions on Software Engineering and Methodology (TOSEM)**, Volume 11 Issue 1
Publisher: ACM Press

Full text available: pdf(779.54 KB) Additional Information: full citation, abstract, references, citings, index terms, review

The Unified Modeling Language (UML) is a family of design notations that is rapidly becoming a de facto standard software design language. UML provides a variety of useful capabilities to the software designer, including multiple, interrelated design views, a semiformal semantics expressed as a UML meta model, and an associated language for expressing formal logic constraints on design elements. The primary goal of this work is an assessment of UML's expressive power for modeling software archit ...

Keywords: C2, Object Constraint Language, Rapide, Unified Modeling Language, Wright, formal modeling, object-oriented design, software architecture

20 MOVE:: component groupware foundations for collaborative virtual environments

Pedro García, Oriol Montalà, Carles Pairot, Robert Rallo, Antonio Gómez Skarmeta
September 2002 **Proceedings of the 4th international conference on Collaborative virtual environments CVE '02**
Publisher: ACM Press

Full text available: pdf(607.34 KB) Additional Information: full citation, abstract, references, citings, index terms

The design of a Virtual Environment (VE) is a distributed problem of multi-user access to shared resources. Such problem requires careful design decisions in order to provide a seamless system infrastructure capable of supporting flexible interactions in the shared scenarios.The complexity of this domain has led to intricate software systems that provide ad-hoc solutions to specific problems. Furthermore, many of them have gone to a dead end, due to their non-extensible design and their lack of ...

Keywords: component groupware, distributed systems, frameworks, virtual environments